METHODS Eighty-four subjects were recruited in which 25 ones were with arteriosclerosis in PA, 29 ones were without arteriosclerosis in PA, and 30 ones were with arteriosclerosis in primary hypertension (PH). Arteriosclerosis was confirmed when there was one or more of the following conditions: carotid atherosclerosis, renal arteriosclerosis, coronary arteriosclerosis and cerebral arteriosclerosis based on color Doppler ultrasound or CT angiography. Their clinical profiles and fasting serum level of β2-microglobulin were recorded and analyzed.

RESULTS The patients with arteriosclerosis in PA had higher serum levels of β2-M than ones without arteriosclerosis in PA and ones with arteriosclerosis in PH respectively (2.44 ± 0.74 mg/L *vs* 1.78 ± 0.59 mg/L *vs* 2.08 mg/L ± 0.67 mg/L). β2-M was positively correlated with the course of PA (r =0.362, P =0.02). Logistic regression analysis indicated that β2-M was a significant predictor for arteriosclerosis in PA (OR=4.852, 95% CI=1.537 to 14.863,P =0.008).

CONCLUSIONS Serum level of β2-M was closely associated with arteriosclerosis in PA, which may suggest high level of β2-M will increase the difficulty of blood pressure lowering treatment.

METABOLIC SYNDROMES

GW26-e0504

EGCG attenuates uric acid-induced inflammatory responses by medicating the NOTCH pathway

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OBJECTIVES The aim of this study is to investigate whether (-)-epigallocatechin-3-gallate (EGCG) can prevent the UA-induced inflammatory effect of Human Umbilical Vein Endothelial Cells (HUVEC) and the involved in vitro mechanisms.

METHODS HUVEC were subjected to uric acid (UA) with or without EGCG treatment. RT-PCR and western blots were performed to determine the inflammation marker levels. Functional studies of the role of Notch-1 in HUVEC cell lines were performed using RNA interference analyses.

RESULTS UA significantly increased the expressions of IL-6, ICAM-1, TNF-α, MCP-1. Meanwhile, the expression of Notch-1 and its downstream genes (HES1, HES5, Hey1) effects significantly increased. Using siRNA, inhibition of Notch-1 signaling significantly inhibited the expressions of inflammatory cytokines and Notch-1 downstream genes expression under UA treatment. Interestingly, EGCG suppressed the expressions of inflammatory cytokines. Western blot analysis of Notch-1 over expression showed that EGCG significantly decreased the expressions of inflammatory cytokines through Notch-1 signaling pathways.

CONCLUSIONS In summary, our findings indicated that Notch-1 plays an important role in the UA-induced inflammatory response and that the down-regulation of Notch-1 by EGCG could be an effective approach to decrease inflammation induced by UA.

GW26-e0771

Two-dimensional speckle tracking imaging in evaluating clinical value of left ventricular myocardial lesions in patients with metabolic syndrome

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OBJECTIVES To evaluate global of left ventricular myocardial lesions in patients with metabolic syndrome(IandIIgroup) and healthy controls using two-dimensional speckle tracking imaging (2D-STI).

METHODS 78 patients with metabolic syndrome(MS) conform to the international diabetes federation (IDF) 2005 Asians MS diagnostic criteria were enrolled in the study. In cases of whether left ventricular structure and function according to the conventional echocardiography were changed, those people were divided into the MSIgroup (n=39)(including definitive diagnosis of diabetes and hypertension) and MSIIgroup (n=39)(including only hyperglycemia and prehypertension);40 healthy adults as control group. All the object of study were applied with conventional echocardiographic assessment of left ventricular global systolic and diastolic function. IE-33 two-dimensional imaging was used to collect and store left ventricular. And Qlab online analysis software was used to analyze each group, including: global longitudinal strain(GLS), global radial strain(GRS) and global circumferential strain(GCS).

RESULTS 1. Compared with control group, systolic pressure, diastolic blood pressure, waist circumference, serum cholesterol, LDL, triglycerides, FPG, UA increased significantly in MS I group ($p < 0.01$);there was no statistically significant difference except LDL, all the indexes had statistically significance in MS II group; Comparison between MS I group and MS II group, there was no statistically significant difference except UA and cholesterol in MS I group, systolic pressure, diastolic blood pressure, waist circumference, LDL, triglycerides, FPG L increased obviously in MS I group.

2. There were no statistically significant difference in LVEDD, LVESD, LVEDV, LVESV, stroke volume, LVEF and LVFS, in three observation group. Compared with control, LA, thickness of inter ventricular septum and left ventricular posterior wall thickness, A peak increased ($p < 0.05$-0.01), E, E/A, E' and A' significantly decrease in MS I group($p < 0.05$-0.01);LA, thickness of inter ventricular septum and left ventricular posterior wall thickness, A peak increases, E, E/A, E' and A' significantly decrease in MS II group ($p < 0.05$-0.01). Comparison between MS I group and MS II group, LA increases in MS I group($p < 0.05$).

3. Compared with control group, GLS, GRS and GCS were all declined significantly in MS I, II group ($p < 0.01$);Comparison between MS I group and MS II group, GLS, GRS and GCS were all declined significantly ($p < 0.01$).

4. ROC curve analysts showed that, GLS curve had certain diagnostic accuracy for MS I group. The best diagnostic cut-off point of it was -13.70%.

CONCLUSIONS 1.The application of 2D-STI can detect early global left ventricular myocardial function dysfunction.

2. GLS curve had certain diagnostic value for the detection of myocardial function in patients with MS.

3. 2 D-STI can be used as a reliable method for early detection of left ventricular myocardial lesions in patients with MS.

GW26-e1836

Correlation between insulin dosage＼insulin usage time and the coronary artery lesions in patients of type 2 diabetes with coronary heart disease in Chongqing China

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OBJECTIVES To explore the correlation between insulin dosage(ID) ＼ insulin usage time (IT) and the coronary artery lesions in patients of type 2 diabetes with coronary heart disease in Chongqing China.

METHODS Three hundred and fifty-three type 2 diabetes patients were randomly divided into 2 groups, a high-dose group (greater-than or equal to 0.5IU/kg) and a low-dose group (less-than 0.5IU/kg). Selected coronary angiography was performed and Gensini score was evaluated the degree of the coronary artery lesions. The insulin sensitivity index (HOMA-IS) was assessed by homeostasis model assessment (HOMA2).

RESULTS In 353 patients, there were statistical differences in two groups, such as insulin C-peptide, HbA1c, ID, DT, IT, IT/DT and the Gensini's score values.($P < 0.05$), but no significant differences such as Sex, Smoking history, age, BMI, TC, TG, LDL, HDL, fasting insulin (fins), Glu, systolic blood pressure and diastolic blood pressure. Coronary artery damage Gensini score in the insulin insensitive individuals was significantly greater than the insulin sensitive individuals. Spearman analysis showed that ID and IT, DT and IT/DT has a positive correlation with the coronary artery damage Gensini score. Multivariate regression analysis, the interquartile range method analysis, and ROC analysis all showed that